Clara Hansen

A problem that West Virginia faces now and will continue to face in the next ten years is homelessness. According to the United States Interagency Council of Homelessness, on any given day there are 1,397 people experiencing homelessness in West Virginia. (https://www.usich.gov/homelessness-statistics/wv/) I think this number will continue to climb due to the growing drug addiction problem that faces West Virginia. While people are homeless and possibly living on the streets, my design of a solar powered heating blanket will provide to them comfort from warmth and reminder that they are not forgotten.

This blanket, “The Sun’s Hug”, will be six feet long by five feet wide. The blanket will have a top material panel and a bottom material panel. This will allow for the heating elements to be between the layers. The topmost outer panel will have small solar panels that will resemble sequins. The small size of the “solar sequins” will allow the solar panels to be stitched to the fabric in a design. (The drawing provided shows one of these designs, with other options available.) While traditional solar panels are delicate, with this “solar sequin” design, the small shape of the sequins will also allow the blanket to be folded into almost any shape. The sequins will be sown together and to the blanket using a single strand of energy transfer thread. During the day the “solar sequins” will absorb the sun’s energy and a battery pack located in between the layers will store the energy until needed. The design of the battery pack will be extraordinarily thin and flexible. Above the bottom layer of fabric will be the heating element used to heat the blanket. The heating element will be thin coils that will conduct the heat throughout the blanket. The heating element will be on the interior of the blanket and will not be visible on the outside of the blanket. The blanket itself will be made from a soft dark color quick-dry fabric.
Clara Hansen - Solar Powered Blanket
5 ft. "The Sun's Hug"

Solar Sequins